

NASA TECH BRIEF

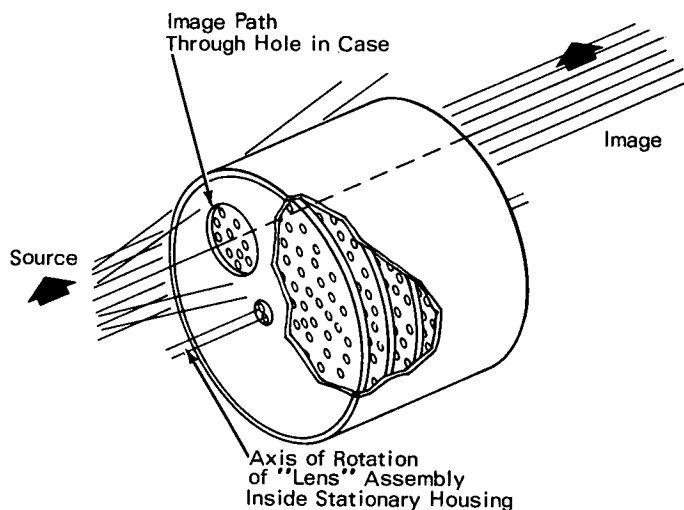
Marshall Space Flight Center



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A Multiple-Plate, Multiple-Pinhole Camera for X-ray γ -ray Imaging

A multiple-plate, multiple-pinhole camera provides the solution to many problems peculiar to radiation treatment and nuclear medicine. For



example, one method of treating brain tumors uses radioactive isotope technetium 99. The resulting γ -rays radiated from the tumor are too energetic to obtain an image by conventional X-ray techniques.

The multiple-plate camera achieves the necessary

resolution by using several thin plates pierced by small pinholes (see fig.).

The novel feature of the new camera is the lens system. The plates, with identical patterns of precisely aligned pinholes, constitute a lens system that produces a high percentage of on-axis rays with a minimum of off-axis rays. By rotating this system about the optical axis, a continuous image of a small-energy X-ray or γ -ray source can be produced with excellent resolution.

Note:

Requests for further information may be directed to:

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No patent action is contemplated by NASA.

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